AMENDMENTS TO CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.   (Currently Amended) A method of creating a panorama image from a series of source images comprising the steps of:

registering adjoining pairs of images in said series ~~based on~~ by comparing and determining common discrete features corresponding to high curvature points within said adjoining pairs of images;

estimating a transform between each adjoining pair of images using said determined common features;

projecting each image onto a designated image in said series using the estimated transforms associated with said image and with images between said each image and said designated image; and

combining overlapping portions of the projected images to form said panorama image.

2.   (Currently Amended) The method of claim 1 wherein during said registering, ~~matching~~ corners in adjoining images are determined and said determined corners are compared thereby to determine matching corners in adjoining pairs of images.

3.   (Original) The method of claim 2 wherein said transform is a projective transform.

4.   (Currently Amended) The method of claim 2 wherein after said estimating, said transform is re-estimated using pixels in said adjoining pairs of images that do not move, prior to said projecting.

5.   (Original) The method of claim 1 wherein during said combining, overlapping portions of said projected images are frequency blended.

6.   (Currently Amended) The method of claim 4 wherein ~~said~~ the determined matching ~~corner registration is~~ corners in the adjoining pairs of images are used to error correct said projecting.

7.   (Original) The method of claim 6 wherein during said combining, overlapping portions of said projected images are frequency blended.

8.   (Original) The method of claim 7 wherein during said estimating, one of a projective, affine and translation transform is estimated.

9.   (Original) The method of claim 1 wherein registering each pair of adjoining images I and I' includes the steps of:

    extracting features in each of said images I and I' corresponding to high curvature points therein;

    determining corners adjacent said features; and

    matching the corners of image I to corresponding corners of image I' thereby to register said images I and I'.

10.   (Original) The method of claim 9 wherein during said determining, corners within a neighbourhood surrounding said features are detected.

11.   (Original) The method of claim 10 wherein said determining is performed until a threshold number of corners is detected.

12.   (Original) The method of claim 11 wherein during said matching, each detected corner in image I' is compared with each detected corner in image I to determine matching corners in said images I and I'.

13.   (Original) The method of claim 12 wherein said comparing includes the steps of:

    determining the correlation between each detected corner in image I' with each detected corner in image I to yield a list of corners in which each corner in image I has a set of candidate matching corners in image I';

    measuring the likelihood that each of the candidate matching corners in said set corresponds to the associated corner in image I; and

    selecting one of the candidate matching corners in said set.

14. (Original) The method of claim 13 wherein during said correlation determining, a normalized cross correlation is used to calculate a correlation score between each detected corner in image I' with each detected corner in image I, correlation scores above a threshold level signifying a candidate matching corner.

15. (Original) The method of claim 14 wherein said correlation determining is performed until a threshold number of candidate matching corners is determined thereby to form said set.

16. (Original) The method of claim 15 wherein during said measuring, a score of matching is used to measure the likelihood that each of the candidate matching corners in said set corresponds to the associated corner in image I based on other matching corner pairs within a neighbourhood surrounding the corners being matched.

17. (Original) The method of claim 9 wherein said estimating includes the steps of:

      selected N pairs of matching corners; and

      solving a set of linear equations modelling said transform thereby to estimate a transform detailing the transformation between said matching corners.

18. (Original) The method of claim 17 wherein said estimating further includes the steps of:

      applying the estimated transform to non-selected pairs of matching corners to evaluate the accuracy of said transform; and

      repeating said selecting, solving and applying iterations to determine the most accurate transform.

19. (Original) The method of claim 18 wherein during said estimating, one of a projective, affine and translation transform is estimated.

20. (Original) The method of claim 19 wherein said transform being estimated is a projective transform, if said estimating fails to yield a projective transform having an accuracy above a threshold, said estimating is re-performed to determine a translation.

21. (Original) The method of claim 19 wherein said transform being estimated is a affine transform, if said estimating fails to yield a projective transform having an accuracy above a threshold, said estimating is re-performed to determine a translation.

22. (Original) The method of claim 17 wherein following said estimating of the transform for each adjoining pair of images, the transforms are re-estimated using only pixels in the adjoining pairs of images that do not move.

23. (Original) The method of claim 22 wherein during the projecting, each image is projected onto the designated image using a projection matrix derived from the product of the transforms associated with said each image and with images between said each image and said designated image, said projection matrix being error corrected using said matching corner registrations.

24. (Original) The method of claim 23 wherein during said combining, overlapping portions of said images are frequency blended.

25. (Original) The method of claim 24 wherein during said frequency blending, different frequency content of said overlapping portions are blended with differing weighting functions.

26. (Currently Amended) A method of creating a panorama image from a series of source images comprising the steps of:

      registering matching corners in each adjoining pair of images in said series;

      using the registered matching corners to estimate transforms detailing the transformation between each adjoining pair of images;

      re-estimating the transforms using non-moving pixels in the adjoining pairs of images;

      multiplying ~~series of~~ selected transforms to project each image onto the center image of said series and error correcting the projections using the registered matching corners; and

      frequency blending the overlapping regions of said projected images to yield said panorama image.

27. (Original) The method of claim 26 wherein during said frequency blending, different frequency content of said overlapping regions are blended with differing weighting functions.

28. (Original) The method of claim 26 wherein during said estimating and re-estimating, projective transforms are estimated.

29. (Currently Amended) The method of claim 28 wherein during said estimating, if projective transforms having an accuracy above a threshold cannot be determined, translations are estimated and re-estimated.

30. (Original) The method of claim 26 wherein during said estimating and re-estimating, affine transforms are estimated.

31. (Currently Amended) The method of claim 30 wherein during said estimating, if projective transforms having an accuracy above a threshold cannot be determined, translations are estimated and re-estimated.

32. (Currently Amended) A digital image editing tool for creating a panorama image from a series of source images comprising:

means for registering adjoining pairs of images in said series ~~based on~~ by comparing and determining common discrete features corresponding to high curvature points within said adjoining pairs of images;

means for estimating transforms between adjoining pairs of images using said determined common features;

means for projecting each image onto a designated image in said series using the estimated transforms associated with said image and with images between said each image and said designated image; and

means for combining overlapping portions of the projected images to form said panorama image.

33. (Currently Amended) A digital imaging editing tool according to claim 32 wherein said means for registering matches corresponding corners in adjoining pairs of images.

34. (Original) A digital image editing tool according to claim 33 wherein said means for estimating re-estimates each transform using pixels in said adjoining pairs of images that do not move.

35. (Original) A digital image editing tool according to claim 34 wherein said means for combining frequency blends overlapping portions of said projected images.

36. (Original) A digital image editing tool according to claim 35 wherein said means for estimating estimates one of a projective, affine and translation transform.

37. (Currently Amended) A computer readable medium embodying a computer program for creating a panorama image from a series of source images, said computer program including:

computer program code for registering adjoining pairs of images in said series ~~based on~~ by comparing and determining common discrete features corresponding to high curvature points within said adjoining pairs of images;

computer program code for estimating a transform between each adjoining pair of images using said determined common features;

computer program code for projecting each image onto a designated image in said series using the estimated transforms associated with said image and with images between said each image and said designated image; and

computer program code for combining overlapping portions of the projected images to form said panorama image.

38. (Currently Amended) A computer readable medium embodying a computer program for creating a panorama image from a series of source images, said computer program including:

computer program code for registering matching corners in each adjoining pair of images in said series;

computer program code for using the registered matching corners to estimate transforms detailing the transformation between each adjoining pair of images;

computer program code for re-estimating the transforms using non-moving pixels in the adjoining pairs of images;

computer program code for multiplying ~~series of~~ selected transforms to project each image onto the center image of said series and error correcting the projections using the registered matching corners; and

computer program code for frequency blending the overlapping regions of said projected images to yield said panorama image.

39. (New)   A method of registering a pair of images I and I' having overlapping content comprising:

extracting features in each of said images I and I' corresponding to high curvature points therein;

determining corners adjacent said features; and

matching the corners of image I to corresponding corners of image I' thereby to register said images I and I'.

40. (New) The method of claim 39 wherein during said determining, corners within a neighbourhood surrounding said features are detected.

41. (New) The method of claim 40 wherein said determining is performed until a threshold number of corners is detected.

42. (New) The method of claim 41 wherein during said matching, each detected corner in image I' is compared with each detected corner in image I to determine matching corners in said images I and I'.

43. (New) The method of claim 42 wherein said comparing includes the steps of:

determining the correlation between each detected corner in image I' with each detected corner in image I to yield a list of corners in which each corner in image I has a set of candidate matching corners in image I';

measuring the likelihood that each of the candidate matching corners in said set corresponds to the associated corner in image I; and

selecting one of the candidate matching corners in said set.

44. (New) The method of claim 43 wherein during said correlation determining, a normalized cross correlation is used to calculate a correlation score between each detected corner in image I' with each detected corner in image I, correlation scores above a threshold level signifying a candidate matching corner.

45. (New) The method of claim 44 wherein said correlation determining is performed until a threshold number of candidate matching corners is determined thereby to form said set.

46. (New) The method of claim 45 wherein during said measuring, a score of matching is used to measure the likelihood that each of the candidate matching

corners in said set corresponds to the associated corner in image I based on other matching corner pairs within a neighbourhood surrounding the corners being matched.

47. (New) The method of claim 39 wherein said estimating includes the steps of:

selected N pairs of matching corners; and

solving a set of linear equations modelling said transform thereby to estimate a transform detailing the transformation between said matching corners.

48. (New) The method of claim 47 wherein said estimating further includes the steps of:

applying the estimated transform to non-selected pairs of matching corners to evaluate the accuracy of said transform; and

repeating said selecting, solving and applying iterations to determine the most accurate transform.

49. (New) The method of claim 48 wherein during said estimating, one of a projective, affine and translation transform is estimated.

50. (New) The method of claim 47 wherein following said estimating of the transform for each adjoining pair of images, the transforms are re-estimated using only pixels in the adjoining pairs of images that do not move.